

# PATENT COOPERATION TREATY

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From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

|  |  |   |
|--|--|---|
|  |  | Date of mailing<br>(day/month/year) see form PCT/ISA/210 (second sheet) |
| Applicant's or agent's file reference<br>see form PCT/ISA/220  |  | <b>FOR FURTHER ACTION</b><br>See paragraph 2 below                      |
| International application No.<br>PCT/IB2004/004315   | International filing date (day/month/year)<br>28.12.2004 | Priority date (day/month/year)<br>05.01.2004                            |
| International Patent Classification (IPC) or both national classification and IPC<br>H04N7/26, H04N5/14, G11B27/00 |  |   |
| Applicant<br>KONINKLIJKE PHILIPS ELECTRONICS N.V.  |  |   |

### 1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for International preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

|  |   |   |
|--|---|---|
| Name and mailing address of the ISA:<br><br><br>European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465 | Authorized Officer<br><br>Schoeyer, M<br>Telephone No. +49 89 2399-2136 |  |
|--|---|---|

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/IB2004/004315

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. **type of material:**
    - a sequence listing
    - table(s) related to the sequence listing
  - b. **format of material:**
    - in written format
    - in computer readable form
  - c. **time of filing/furnishing:**
    - contained in the international application as filed.
    - filed together with the international application in computer readable form.
    - furnished subsequently to this Authority for the purposes of search.
3.  In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or  
industrial applicability; citations and explanations supporting such statement**

**1. Statement**

|                               |             |     |
|-------------------------------|-------------|-----|
| Novelty (N)                   | Yes: Claims | 1-6 |
|                               | No: Claims  |     |
| Inventive step (IS)           | Yes: Claims |     |
|                               | No: Claims  | 1-6 |
| Industrial applicability (IA) | Yes: Claims | 1-6 |
|                               | No: Claims  |     |

**2. Citations and explanations**

**see separate sheet**

**Box No. VII Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

**see separate sheet**

**WRITTEN OPINION OF THE  
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AUTHORITY (SEPARATE SHEET)**

International application No.

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**V. Reasoned Statement**

**1. Prior Art:**

Reference is made to the following documents:

- D1: GOMILA C ET AL: "New features and applications of the H.264 video coding standard" INFORMATION TECHNOLOGY: RESEARCH AND EDUCATION, 2003. PROCEEDINGS. ITRE2003. INTERNATIONAL CONFERENCE ON AUG. 11-13, 2003, PISCATAWAY, NJ, USA, IEEE, 11 August 2003 (2003-08-11), pages 6-10, XP010684962 ISBN: 0-7803-7724-9
- D2: SANGKEUN LEE ET AL: "Efficient scene segmentation for content-based indexing in the compressed domain" IEEE FOURTH WORKSHOP ON MULTIMEDIA SIGNAL PROCESSING, 3 October 2001 (2001-10-03), pages 473-478, XP010565818 CANNES, FR
- D3: FERNANDO W A C ET AL: "A UNIFIED APPROACH TO SCENE CHANGE DETECTION IN UNCOMPRESSED AND COMPRESSED VIDEO" IEEE TRANSACTIONS ON CONSUMER ELECTRONICS, IEEE INC. NEW YORK, US, vol. 46, no. 3, August 2000 (2000-08), pages 769-779, XP001142901 ISSN: 0098-3063
- D4: KOTO S-I ET AL: "Adaptive Bi-predictive video coding using temporal extrapolation" PROCEEDINGS 2003 INTERNATIONAL CONFERENCE ON IMAGE PROCESSING. ICIP-2003. BARCELONA, SPAIN, SEPT. 14 - 17, 2003, INTERNATIONAL CONFERENCE ON IMAGE PROCESSING, NEW YORK, NY : IEEE, US, vol. VOL. 2 OF 3, 14 September 2003 (2003-09-14), pages 829-832, XP010669962 ISBN: 0-7803-7750-8

**2. Article 33(3) PCT**

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of independent claims 1, 5 and 6 does not involve an inventive step in the sense of Article 33(3) PCT.

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From document D1 it is known (see page, paragraph IV. B) to provide a method of introducing a gradual scene change by changing the weighting of coding parameters.

From document D2 it is known (see introduction) to detect a scene change detection based on e.g. motion vector distribution.

The skilled person who has coded an image sequence according the method set out in D1 and now confronted with the problem of detecting a thus created transition will consider using the available coding information to determine a gradual scene change and arrive at the full combination of features of claim 1, without the exercise of any inventive step.

Claims 5, 6:

The subject-matter of claims 5 and 6 relates to a device functioning in accordance with the method of claim 1, and a computer program product to carry out the method of claim 1. The skilled person will find it obvious to use a device or a computer program product to carry out the method of claim 1. As a consequence the subject-matter of claims 5 and 6 is also considered to be obvious.

Dependent claims:

The subject-matter of the dependent claims is also obvious as will be set out below:

- the use of directional preferences (as in claim 2), -see D2 (Introduction);
- location and duration of scene change is stored in a file (as in claim 3), -common general knowledge;
- syntax and semantics are according to H.264/AVC standard (as in claim 4), -see D1 (title);

3.. Article 33(4) PCT

The subject-matter of claims 1-6 is industrially applicable in the field of scene change detection.

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1. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D4 are not mentioned in the description.
2. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
3. In order to facilitate the examination of the conformity of the amended application with the requirements of Article 34(2)(b) PCT, the applicant is requested to clearly identify the amendments carried out, no matter whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based (see also Rule 66.8(a) PCT).